

# Special Needs Populations

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# Overview of The Presentation

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- Populations at Risk
- Warnings
- Evacuation
- A Practical Approach
  - Individual, household, community and agency strategies

# Disabilities, Disaster & Evacuation

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- *“not much research exists”* (Jones 1987).
- *“not much in the literature”* (Parr 1987).
- *“no general agreement on how to evacuate or how to assist”* (Ragsdale and Simpson 1996).
- *“faced with a significant lack of data, professionals are unable to suggest alternatives”* (Christenson et al. 2006).
- *“you are going to have to piece things together”*
  - *Dr. Vincent Campbell, Working Conference on The Elderly and Persons with Disabilities, June 2006*
  - *PLEASE SUPPORT RESEARCHERS WHEN THEY KNOCK ON YOUR DOOR.*

# What *do* we know about disabilities and disaster evacuation?

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- We aren't adequately prepared (DHS June 2006)
  - Lack staff expertise, time, funding
- Perception is important.
  - Individual responsibility is a possibility – but not for all.
  - Public education and outreach works, in part because it makes those who feel vulnerable more likely to take action.
  - Disasters may be just another challenge among many.
    - Sources: VanWilligen et al 2002; Rahini 1993.

# CA Wildfires 2003

(2003 State Independent Living Council)

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- Multiple counties; 730,000 acres burned; 22 deaths; 200 injuries; 36,000 homes destroyed.
- **Prepare:** few emergency bags; lack of a fire-safe perimeter.
- **Notify:** difficulty getting the warning in rural areas with rapid onset; TV and radio signals not available; poor directions.
- **Evacuate:** little transportation, lack of family, MARTA blocked by police; registry locked up.
- **Shelter:** not ADA compliant, service animals not allowed, no sign language interpretation.

# *Elderly & Disasters: what do we know?*

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- The elderly may be “deprived” or “inoculated.”
- Reluctant to access services.
- Problems with paperwork.
- Interactive Effects:
  - Disproportionately low income.
  - Racial and Ethnic Issues.
  - Gender Issues.
  - Language Issues.
  - Disability/Health Issues.

■ Sources: Friedsam 1962; Bolin 1982; Childers 1999.

# *How do the elderly respond to evacuation messages?*

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- They may lack critical resources to evacuate: health, transportation, knowledge.
- When warned, they do respond.
- When not reached, their death and injury rates are much higher.
  - *As many as 70% of the Katrina fatalities may be over 65.*
- Sources: Hutton 1976; Lindell and Perry 1997; Fernandez et al. 2002.

# Nursing Homes (GAO, Post Katrina)

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- “If hospital and nursing home administrators decide to evacuate, they face the challenge of securing sufficient and appropriate transportation to move their patients or residents.”
- “According to hospital and nursing home administrators, their contractors providing transportation would be unlikely to provide them with vehicles during a major disaster because local demand for transportation would exceed supply.”



# Can the federal government help?

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- “While NDMS supports the evacuation of patients in need of hospital care, the program was not designed nor is currently configured to move nursing home residents.”
  - Translation: you better develop your own plans, procedures and mutual aid agreements including transportation, transfers, and beds.

# *Warning people to evacuate*

(Mileti 1999)

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1. Hearing the warning
2. Believe that it is credible
3. Confirm that a threat exists
4. Does the warning pertain to ***me***?
5. Determine if protective action needed
6. Is protective action feasible?
7. Determine what action to take

# 1. Hearing the Warning

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# Situation Report:

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- “There’s a hole in the weather warning system.”
  - Dr. Vincent Wood, Norman National Weather Service
- “America’s current public warning and emergency communication systems get a failing grade from deaf, hard of hearing, late-deafened, and deaf-blind individuals.”

■ Deaf and Hard of Hearing Consumer Advocacy Network 2004.

# Persons that are deaf or hard-of-hearing

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- FCC policies & implementation.
- CC is not enough....multiple means to communicate risk information.
  - Have you tried CC?
- Pagers....but technology costs \$.
  - Sources: Vincent Wood and Robert Weisman, 2004.; Consumer Action Network; National Organization on Disabilities.

## *Technology is not enough.*

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“It is not just a matter of knowing sign language. It takes years of training to become an interpreter who can work with a group like this, and it takes an understanding of the *deaf culture* to be effective.”

Gallaudet University graduate student assisting FEMA post-impact.

# Being deaf during Katrina

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- *“We had to invent a whole new vocabulary.”*
- Issues
  - English is a second language.
  - Levels of communication vary.
    - Deaf from birth? Is it age related?
    - Deaf/blind?
  - Cost of technologies.
  - TV meteorologists.
  - Scrolls obscure closed-captioning.
- **But the Deaf & Blind Community also stepped up.**

# Deaf Communications: Katrina

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- Technologies that were used:
  - Sidekicker pagers.
  - Text messaging worked with cells one week after.
  - Email, web sites, newspapers.
- *Note the potential bias, though!*
  - *Age, income “compound.”*
  - *There is no technological panacea.*



## 2. Is it credible?

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- **How credible are you?**

- “Caring...concern...trustworthy...honest, altruistic, objective.”

- **Cultural credibility filters:**

- “Mexican Americans reported obtaining proportionately more information through **social networks** than either African Americans or whites.”
    - ***This is likely to be a process for Hispanic elderly.***

- Tierney, Lindell and Perry, *Facing the Unexpected*, p. 31.

# Is the message understandable?

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- In one study, “communication was the critical factor which hindered the evacuation of individuals with disabilities.”
  - Clear instructions: tell people exactly what to do.
    - *You might be surprised how frequently this does not happen.*
  - Fire research shows that, for some populations, practicing specific actions with frequent re-training works. Partner with fire organizations to design and implement training.
    - Especially important for those with cognitive impairments.
- Christensen et al. 2006.

### 3. Does a threat exist?

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- People will confirm the threat through social networks.
- *So, how are you going to use social networks to facilitate evacuation?*

## *Reducing confirmation time.*

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- Gender matters. Research shows that:
  - Women are more likely to believe warnings.
  - Women are more likely to warn others.
  - Women are more likely to want to evacuate.
  - Women appear more likely to gather the family.
  
- *So....engage women in the community, facilitate their leadership!*

## 4. Does it pertain to me?

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- To decide, I'll ask:
  - What are others doing? How does this compare to my previous experiences? Are others **like me** heeding the warning?
    - Social Comparison Theory
- *Translation:* it's not just the physical cues of the storm....it's the social cues too.
  - Tell neighbors and family to help you warn those at risk.
    - ***Get the Media to help you with this.***

## 5. Do I need to act?

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# The Elderly and Katrina

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- Long-time homeowners.
- No Cars. Fear of Highway.
- Camille, Betsy were the benchmark.
- Uniting the Family:
  - “We finally left Sunday morning.”
  - Race/ethnicity/income

## 6. What can I do about it?

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- I don't have transportation
  - *Can I get there? I don't know the route?*
  - *Is the shelter ready for my needs?*
- I live alone, I'm isolated.
  - A particular problem for the elderly, especially men.
- I have a specific issue:
  - "Sight-impaired or blind persons...rely on memory as a navigation device; imagine trying to evacuate a building that is in a state of disarray." (Imperiale 1991).
    - Imagine going somewhere you have never been. Would you go? Is it better to stay here?



# Mobility issues and Katrina

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- Separated from your wheelchair.
  - Specific for the disability.
  - Retrieval issues.
- Separated from your service animal.
- Separated from your family.
  
- We need to keep people together.
- We need to keep people with their resources.
  - *Have we trained our evacuation staff for this?*

# Hurricanes Floyd/Charley: Disabled

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- Individual with disability is often “one deep.”
  - What if that one person is out of town?
  - They are less likely to evacuate.
  - They may need backup persons and plans.
- VanWilligen et al.

# Seniors/Katrina

(GAO 18 May 2006)

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“The elderly are more likely to be represented among the transportation disadvantaged because they are more likely, compared with the general population, to have a disability, have a low income, or choose not to drive.”

# Elderly issues related to evacuation

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- Sensory deprivation, delayed response, transfer trauma, nutrition.
- Social support systems may not last during a prolonged evacuation.
- Cultural issues matter.
  - Asian Americans especially likely to under-use services.
  - Native American elders may have additional issues.
- Sources: [www.aoa.gov](http://www.aoa.gov); Poulshock and Cohen 1975; Kilijanek and Drabek 1979; Eldar 1992).

# Frail Elderly

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- Frail Elderly:
  - “Access to dialysis and other critical services are related to transportation.”
  - “In many cases, frail elderly are dropped-off at shelters and nursing homes without care instructions or medical records.” (Fernandez et al. 2002).
- Coordination among agencies and organizations with resources is crucial.
  - Are all the players at the table for this?

# What about my pet/service animal?

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- People, especially the elderly, will refuse to evacuate without pets.
  - They *are* family.
  - Service animals crucial.
  - So....plan for pets, educate the public and partner with pet care providers.
  - Treat service animals separately from pets.
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- ("Layla" and "Nickel" Photos courtesy of Cassie Miller, Oklahoma State University)

## 7. Take Action

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- Tornado warnings may be received 7-15 minutes before impact.
- Seven steps = people die.
- We need to motivate, support, educate people to spur them through the steps.
  - They will go through the steps.
  - We need to jump start every step.
  - This is a never-ending process.

# Practical strategies

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- Individuals
- Agencies
- Households
- Community organizations



# Individuals

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- Emergency bags (preparenow.org).
- Checklists and GuideCards (eadassociates.com)
- Buddy Systems: fire research suggests:
  - Minimum one buddy for a visibility or hearing issue; minimum two for a mobility issue.
  - Don't forget backups.
  - Train buddies carefully; Involve individual with disability in training for lifts and transfers.
- Call down lists/phone "trees"
  - Branch managers (advocacy organizations) connected to clients.
- Neighborhood Watches.
  - Sources: Rahimi 1994; [www.preparenow.org](http://www.preparenow.org); Fernandez et al. 2002; T.R.A.C. LA; Upper Pinellas County Red Cross, Tampa, FL; GAO 2006; National Research Council Canada).

# *Emergency Bags* (<http://www.preparenow.org/eqtips.html>)

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- Health card
- Instructions on how to be helped
- Key docs: SSN, will, bank # (sealed bag with copy to out of state friend).
- Medications for 7-14 days.
- Flashlight.
- Signaling device (whistle).
- Dark glasses, folding cane
- Battery operated radio and extra batteries.
- Store where reachable.

# Buddies ([www.preparenow.org](http://www.preparenow.org))

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- Who really needs them? Self-assessment quiz at [www.preparenow.org/eqtips.html](http://www.preparenow.org/eqtips.html)
- Three persons at work, home plus out of state support.
- Keys, emergency supplies, documents.
- Communication system during event.
- How will you alert buddies/IWD?

# Visual Impairments

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- Reluctant to leave familiar surroundings
- May require assistance with orientation and navigation
- Personal preparedness (AFB, ACB)
- Personal Support (NOD)
- Free course:
  - [www.afb.org](http://www.afb.org), Safety in the Home

# Executive Order 13347

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- Recommendations:
  - “increase the rate of participation of people with disabilities in emergency planning...preparedness, response and recovery drills and exercises”
  - “ensure that Telecommunications personnel and captioners can travel to an from their designated facilities to provide continuity of services.”



# *Protect and Empower*

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- “I wanted to provide public education and increase awareness so the hearing impaired could *take an active role* in enhancing their own level of safety.”
  - Jim Davis, EM  
Coordinator, Pittsylvania County VA.

# CERT and Deaf Citizens

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- “As much as possible, disabled persons must be prepared to enact self-help procedures after disaster.”
  - (Parr 1987)

# Agencies

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# I don't know enough.....

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- [www.nod.org](http://www.nod.org), downloadable brochures specific to disasters and disabilities
- A free service of the Office of Disability Employment Policy, U.S. Department of Labor
  - <http://www.jan.wvu.edu/media/atoz.htm>
  - Specific, downloable *fact sheets* to every possible disability and how you might accommodate and negotiate.
  - Specific to the workplace, but insightful.

# Communication: don't rely on one single strategy

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- Use social networks, partnering organizations
  - Multiple media, redundant messages
  - Train the media
  - Diverse strategies for diverse audiences
    - Cognitive, sensory, mobility disabilities
    - Seniors: who do they listen to and trust?
  - Do you like brochures?
  - Magnets, public service announcements, cups, kits, t-shirts with maps!
  - Tool banks, stockpiles of supplies
- “You have to sell it like coca-cola. You have to be unrelenting.”
    - Dr. Dennis Mileti,  
*Rebuilding New Orleans Conference*, September 25, 2006

## Deaf and Hard of Hearing Consumer Advocacy Network 2004

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- Ask. Pull people in early in the process.
- Provide interpreters, text messaging.
- Use Amber Alert.
- Keep local organizations and individuals informed.
- Work with the NWS, cable services, ISP including wireless.
- Install technologies.

# Establishing registries

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- Time & Staff Cost
- Format
- Access
- Invasion of privacy
- Difficult to keep up
- Link to transportation inventories; cross-agency planning and coordination
- Needs to be partnered
  - Fire department
  - Red Cross
  - Senior Networks
  - Disability advocates
  - Health agencies

*“Some may construe such an identification scheme as an invasion of privacy and contrary to true independence.” (Jones 1987).*

# Service Animals (NOD)

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- ADA does not require identification, license or training.
- If someone tells you it is a service animal it is, including for emotional and psychological comfort.
- You can't exclude them unless they are a threat.
- What you can do:
  - Help people plan.
  - Develop "animal support network."
    - Vets, shelters, humane society, foster homes.
  - Create "pet friendly shelters."

# \$\$\$\$\$ Show me the money \$\$\$\$\$

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- Local fundraisers
  - civic groups, university clubs, faith based
- Foundations
  - Private, corporate (Gates Foundation.....)
- Universities
- Federal programs
- Partner with other agencies in your state

# The Community

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“Emergency managers should focus on leveraging the services provided by existing organizations, sensitize them to disaster issues, and encourage them to incorporate disaster-planning principles into their operations.” (Fernandez et al. 2002)

# Who are your partners?

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- Fire department
- Home health organizations
- Physicians
- Red Cross
- School systems
- Social service providers
- Advocacy organizations
- Veterinary schools, Humane Society
- Department of Transportation (primary federal agency to be responsible for mass evacuations).
- Disability Support & Advocacy Agencies.
- Administration on Aging network.
- Health Departments....and so many more.

- “Have staff members sensitized and educated by a representative from a local Independent Living Center.”  
(Imperiale 1991)



# *Congregations Who Care--Prepare*

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- Four steps:
  - Coordination with others
  - Community education programs
  - Training the congregation
  - Personal planning encouragement
- Specific initiatives for disabilities
  - [www.nod.org/congregationsprepare](http://www.nod.org/congregationsprepare)

## Contingency plans for city employees

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- “During the 1995 Chicago heat wave, many elderly did not travel to shelters and aid distribution centers...during subsequent heat waves, city workers were dispatched to knock on the doors of the elderly to deliver food and water and provide transportation to the cooling shelters.”  
(Fernandez et al. 2002).

# Identify high risk locations (nursing homes)

(GAO, Post-Katrina)

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- Independent nursing homes most at risk
- What worked during Katrina:
  - Clear articulation of plans with EMA, school boards and transit agencies.
  - Voluntary registry with specialized categories.
  - Involvement of social service providers.
  - Formal agreements over liability and reimbursement.
  - Exercises.

# Transportation solutions during Katrina: they came from the community!

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- Pre-existing citizen networks.
- Community outreach activities
- Neighborhood watch networks.
- Home health organizations.
- Physicians.
- Red Cross.

▪ Source: GAO Study

# Transportation Inventory & Networks

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- Identify available transportation options.
- Inventory by type x disability.
- Identify availability vehicles, drives.
- Locate proximity to those at risk.
- Consider GIS mapping.
- Develop agreements.
  - Pre-draft liability and reimbursement.
  - Contingency plan.
- Practice, practice, practice.

# Build disaster resilient organizations

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- Are there plans in place at work for your employees? (NOD 2005)
  - 2001 50% PWD said no
  - 2003 27% PWD said no
  - 2005 34% PWD said no
- Mandate evacuation plans for employees with disabilities.

# Exercises and drills

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- “makes a potential disaster *very real* to residents and community responders” (Snyder 1991).
- People change their behavior when they practice that behavior.
- Make it realistic.
- Involve those at risk.
- Involve your partners.

# Opportunities for Outreach

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## ■ Specific Dates

- Tornado Awareness Week
- EM Month
- Disaster Day
- April 19
- September 11
- Hurricane Katrina

## ■ Think outside disasters

- Cinco de Mayo
- Hispanic Awareness Month
- Ethnic Festival Events
- Disability Awareness Week
- Grandparents' Day
- Music festivals